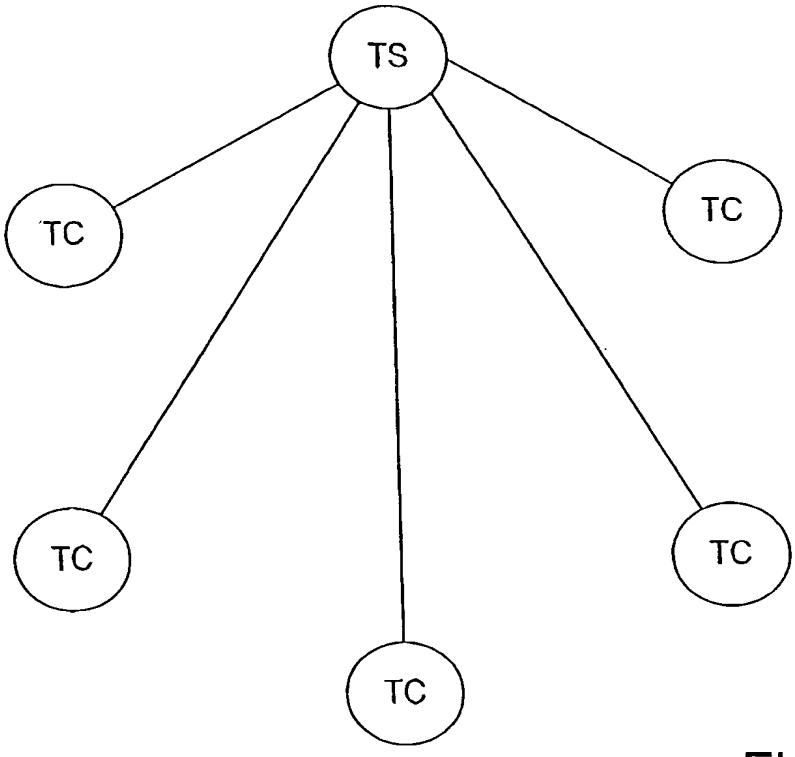

Fig. 1(a)

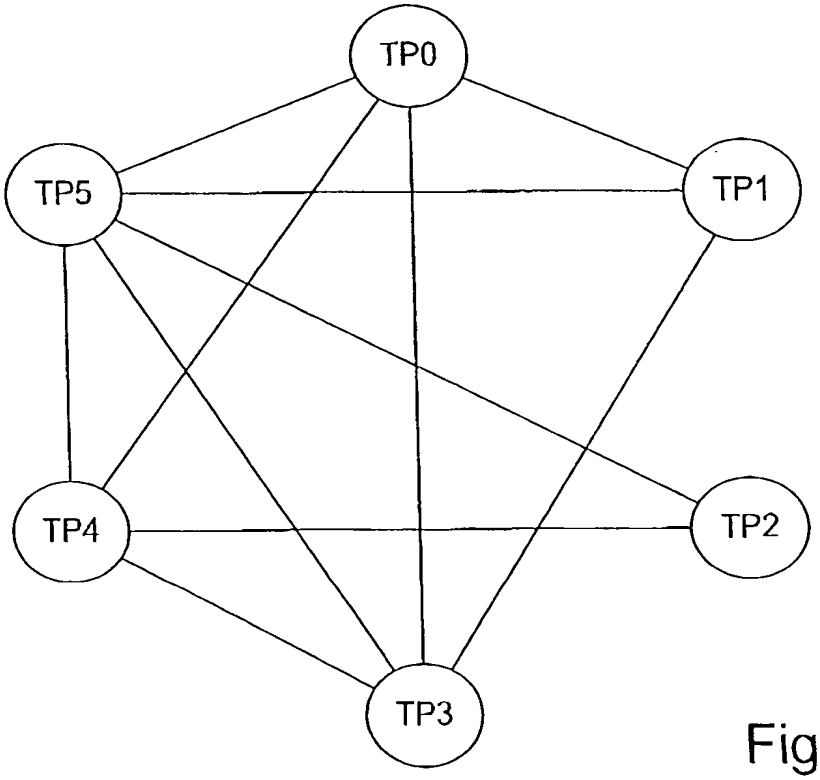

Fig. 1(b)

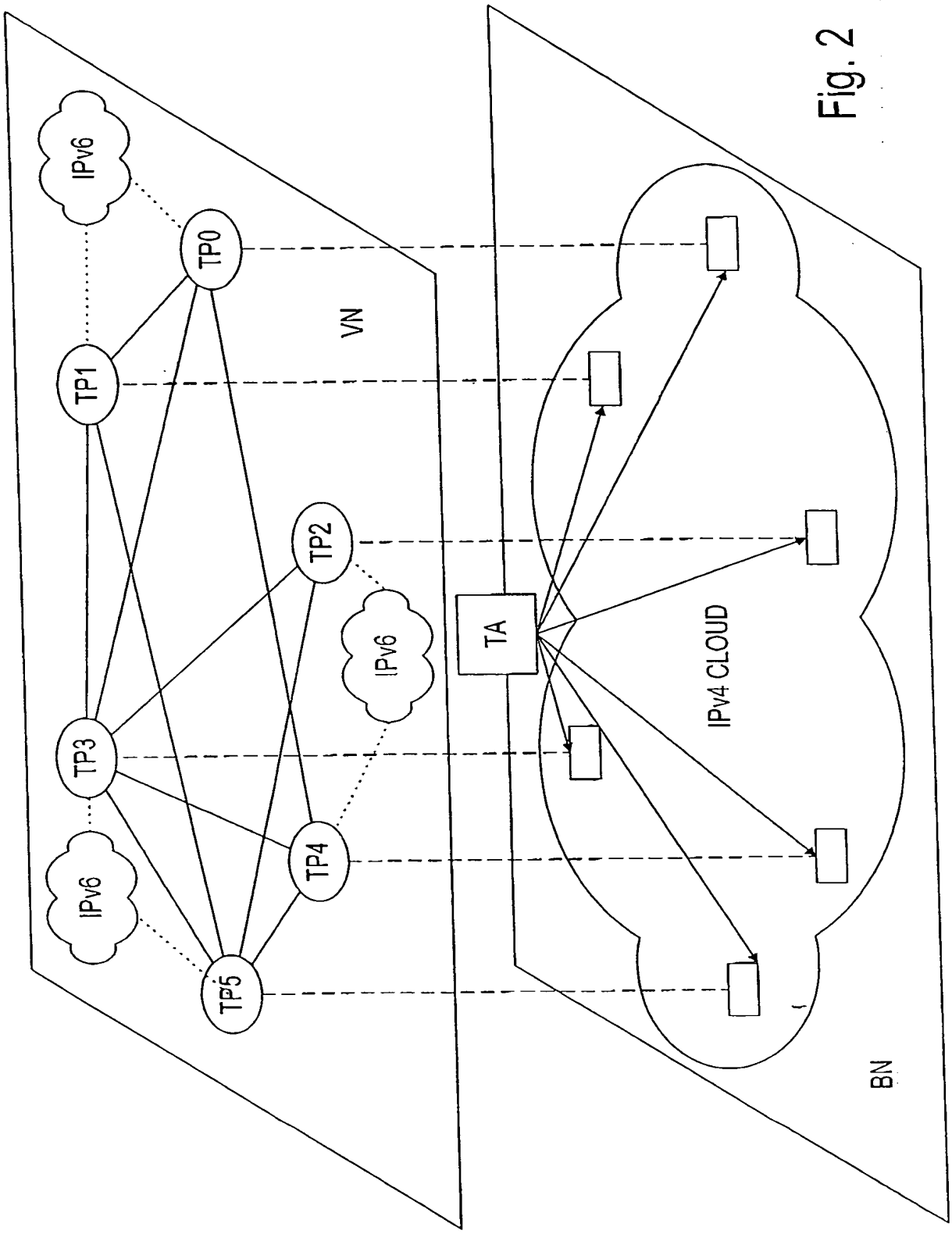

Fig. 2

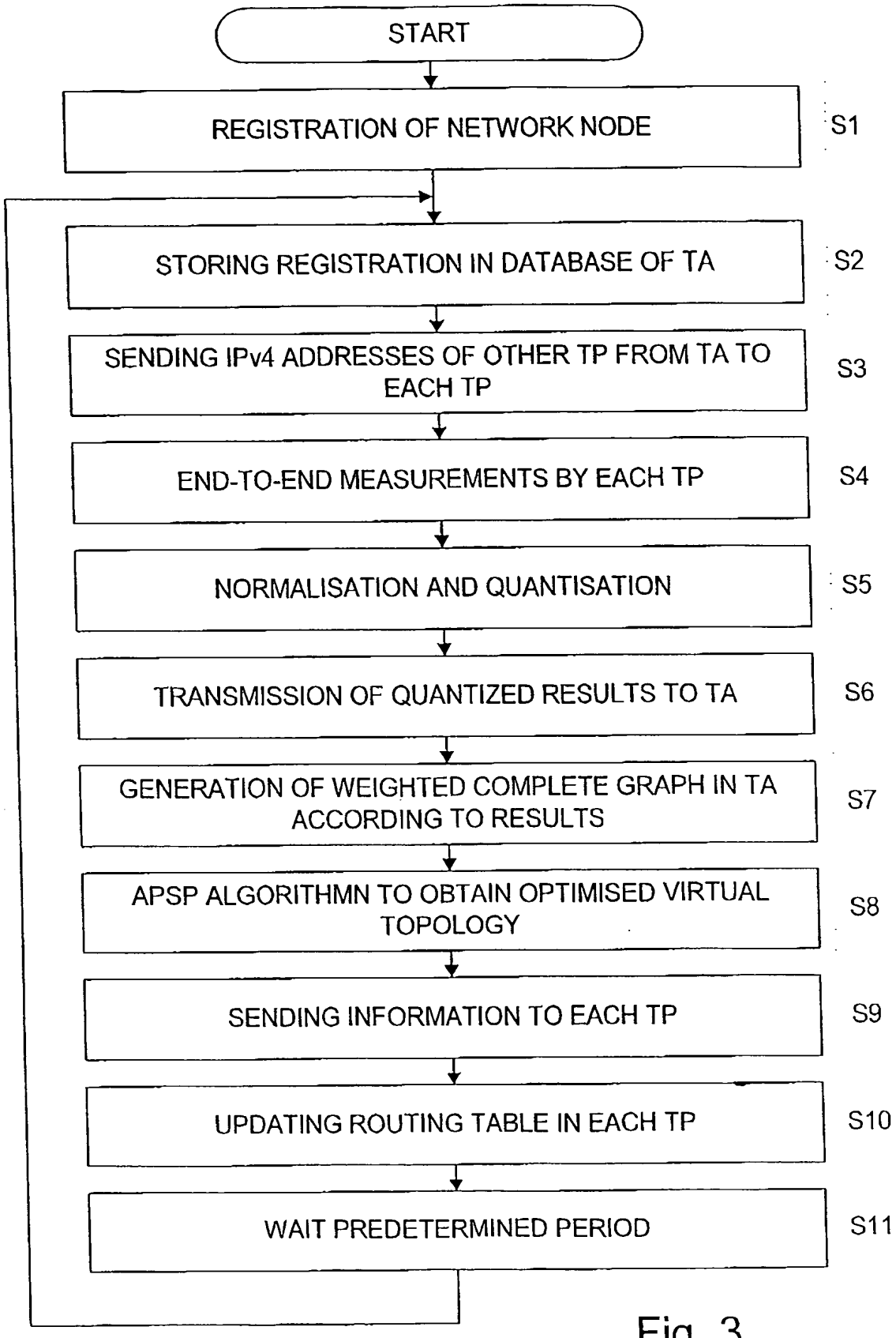
START
REGISTRATION OF NETWORK NODE
S1
STORING REGISTRATION IN DATABASE OF TA
S2
SENDING IPv4 ADDRESSES OF OTHER TP FROM TA TO EACH TP
S3
END-TO-END MEASUREMENTS BY EACH TP
S4
NORMALISATION AND QUANTISATION
S5
TRANSMISSION OF QUANTIZED RESULTS TO TA
S6
GENERATION OF WEIGHTED COMPLETE GRAPH IN TA ACCORDING TO RESULTS
S7
APSP ALGORITHMN TO OBTAIN OPTIMISED VIRTUAL TOPOLOGY
S8
SENDING INFORMATION TO EACH TP
S9
UPDATING ROUTING TABLE IN EACH TP
S10
WAIT PREDETERMINED PERIOD
S11

Fig. 3

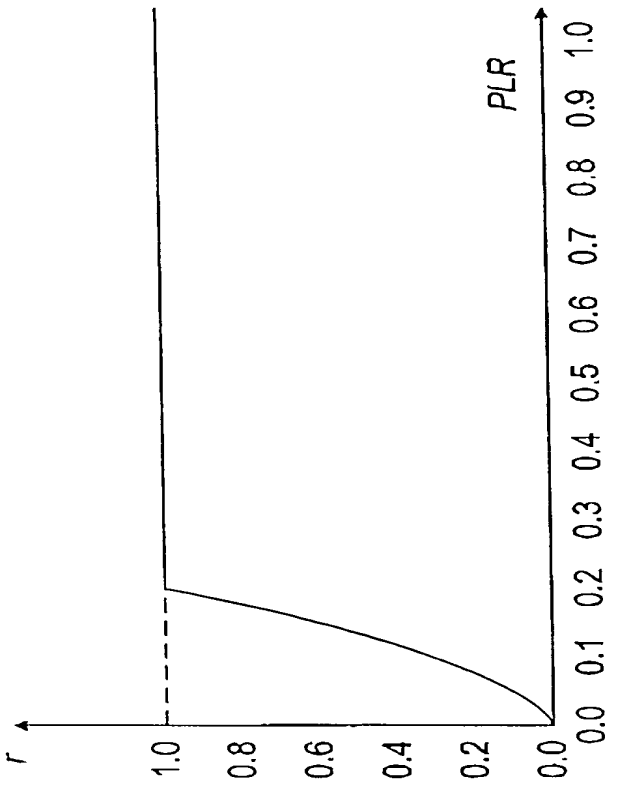

Fig. 4(b)

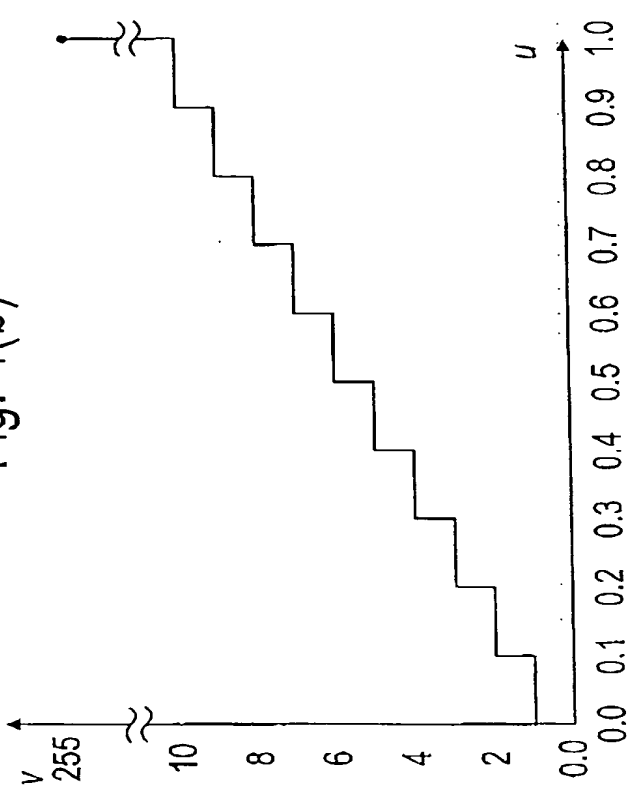

Fig. 4(d)

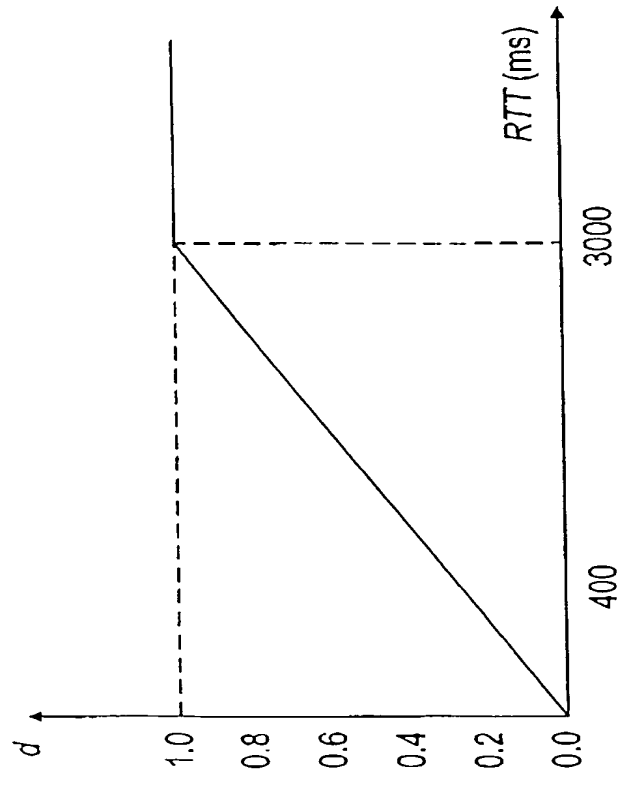

Fig. 4(a)

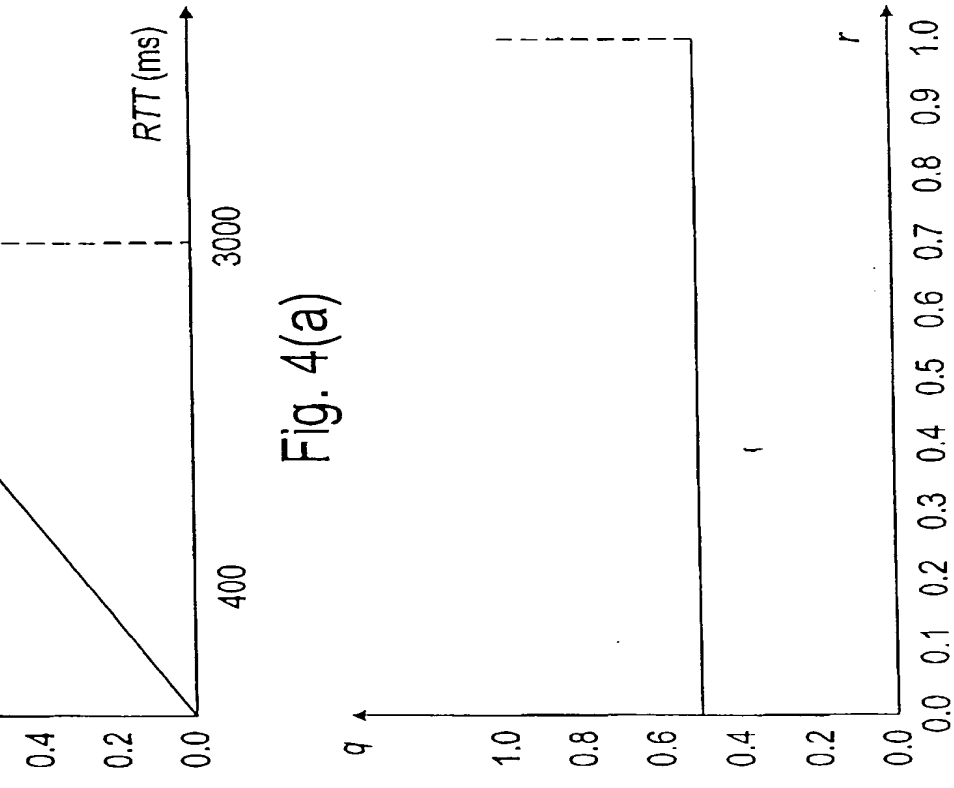

Fig. 4(c)

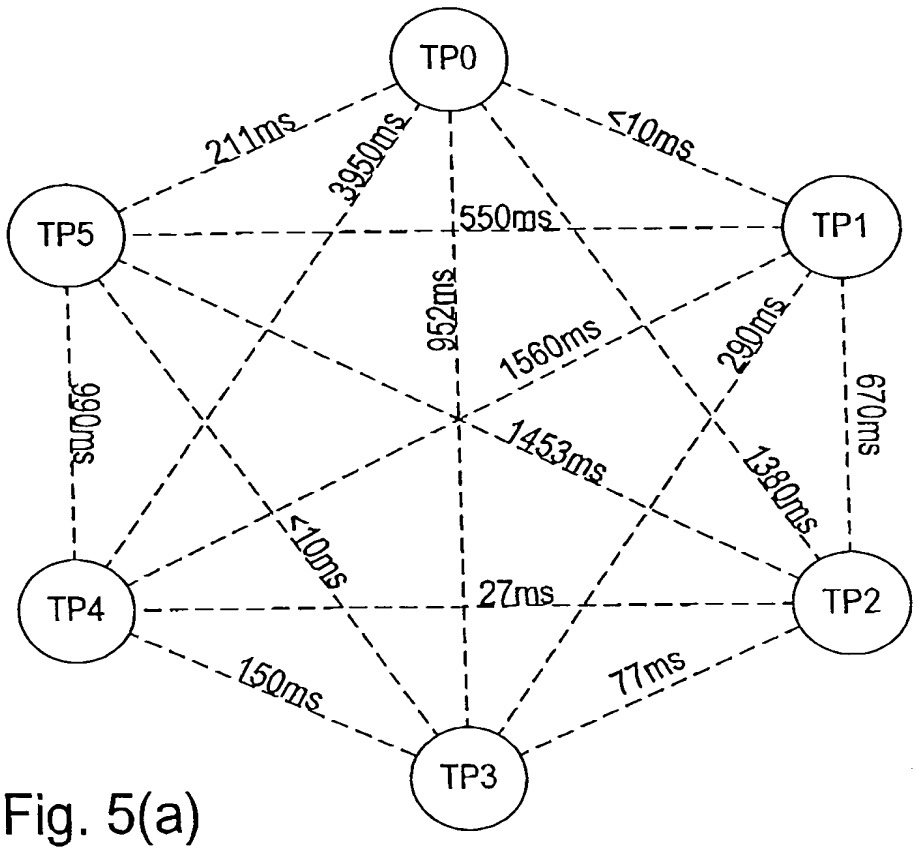
TP0
TP1
TP2
TP3
TP4
TP5
211ms
3950ms
≤10ms
550ms
952ms
1560ms
290ms
990ms
670ms
1453ms
1380ms
≤10ms
27ms
150ms
77ms

Fig. 5(a)

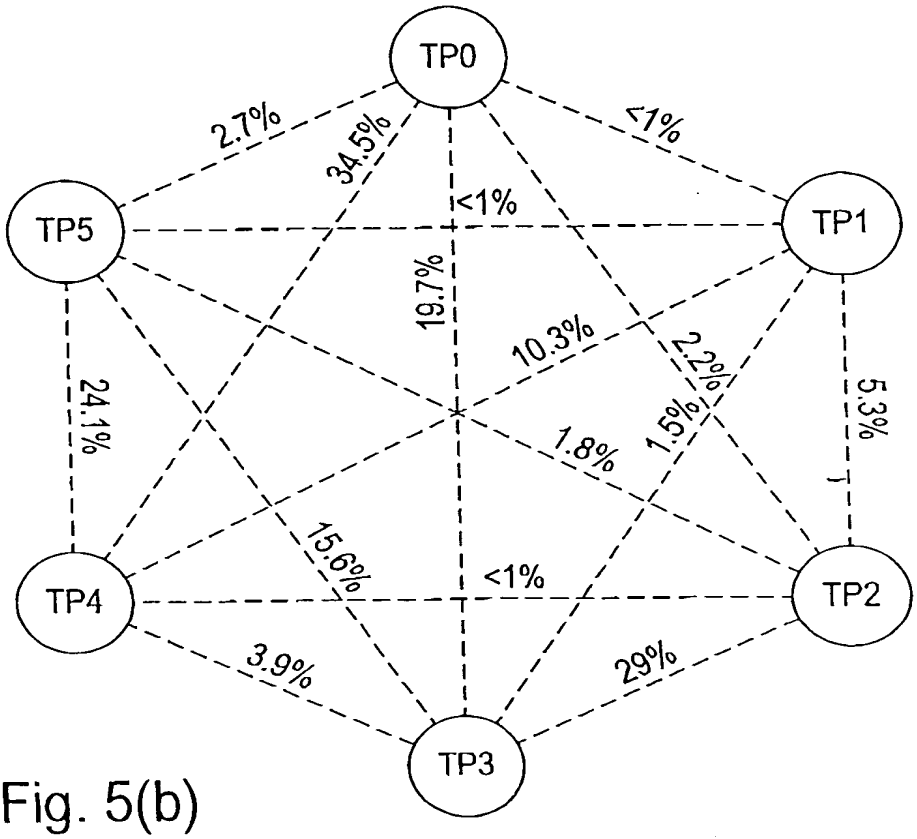
TP0
TP1
TP2
TP3
TP4
TP5
2.7%
34.5%
<1%
<1%
19.7%
10.3%
2.2%
24.1%
1.8%
1.5%
5.3%
15.6%
<1%
3.9%
29%

Fig. 5(b)

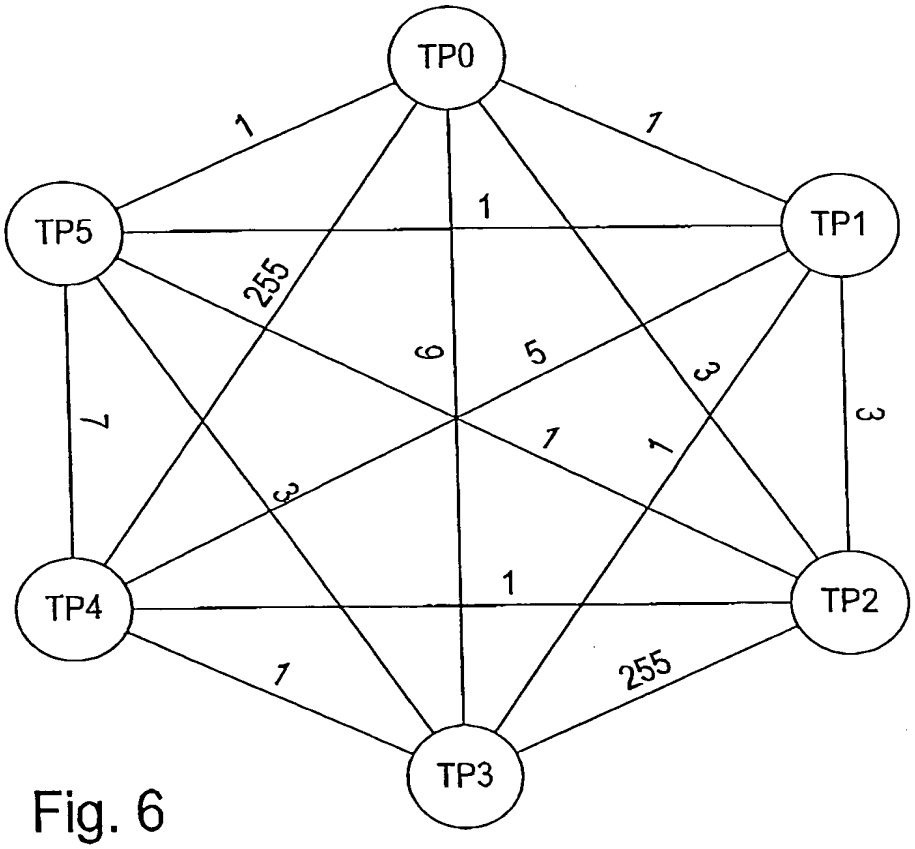
TP0
TP1
TP2
TP3
TP4
TP5
1
1
1
255
6
5
3
1
1
3
1
3
1
1
255

Fig. 6

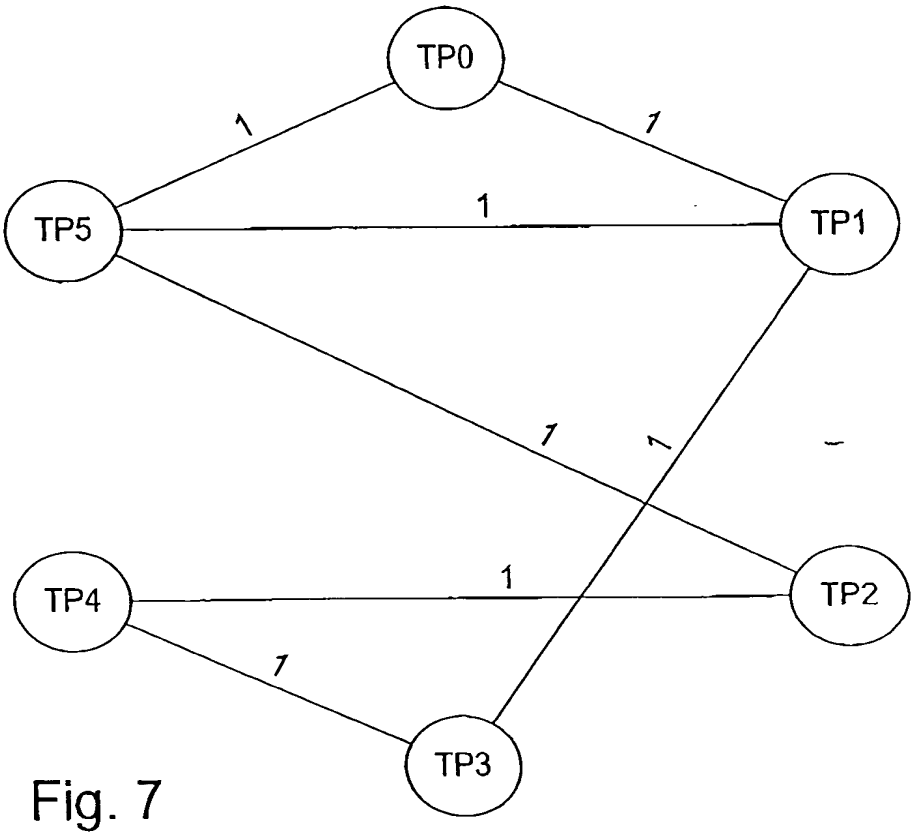
TP0
TP1
TP2
TP3
TP4
TP5
1
1
1
1
1
1
1

Fig. 7